

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F.
Larsen

January 1998

Test 1816: New Holland 9682 Quadrasync Diesel

Follow this and additional works at: <https://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Applied Mechanics Commons](#)

"Test 1816: New Holland 9682 Quadrasync Diesel" (1998). *Nebraska Tractor Tests*. 261.
<https://digitalcommons.unl.edu/tractormuseumlit/261>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

SUMMARY OF OECD TEST 1816—NEBRASKA SUMMARY 283

NEW HOLLAND 9682 QUADRASYNC DIESEL

12 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed (PTO speed-997 rpm)					
319.8 (238.4)	2100	18.86 (71.41)	0.415 (0.252)	16.98 (3.34)	
Standard Power Take-off Speed (997 rpm)					
319.8 (238.4)	2100	18.86 (71.41)	0.415 (0.252)	16.98 (3.34)	
Maximum Power (2 hours)					
337.5 (251.7)	1800	18.06 (68.35)	0.377 (0.229)	18.70 (3.68)	

VARYING POWER AND FUEL CONSUMPTION

319.8 (238.4)	2098	18.86 (71.41)	0.415 (0.252)	16.98 (3.34)	Air temperature
286.2 (213.4)	2211	18.31 (69.31)	0.450 (0.274)	15.63 (3.08)	73°F (23°C)
218.6 (163.0)	2251	15.25 (57.74)	0.492 (0.299)	14.33 (2.82)	Relative humidity
146.2 (109.0)	2261	12.69 (48.04)	0.611 (0.371)	11.54 (2.27)	72%
73.9 (55.1)	2281	9.05 (34.26)	0.861 (0.524)	8.18 (1.61)	Barometer
3.0 (2.2)	2312	5.88 (22.25)	14.011 (8.523)	0.50 (0.10)	29.3" Hg (99.19 kPa)

Maximum Torque - 1159 lb.-ft. (1572 Nm) at 1311 rpm
Maximum Torque Rise - 45.0 %
Torque rise at 1700 engine rpm - 30 %

DRAWBAR PERFORMANCE

FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power 4th (L4) Gear									
284.7 (212.3)	22940 (102.04)	4.65 (7.49)	2100	2.1	0.462 (0.281)	15.25 (3.00)	178 (81)	41 (5)	28.9 (98.0)
75% of Pull at Maximum Power 4th (L4) Gear									
229.2 (170.9)	17245 (76.70)	4.98 (8.02)	2232	1.5	0.527 (0.320)	13.38 (2.63)	176 (80)	43 (6)	29.0 (98.3)
50% of Pull at Maximum Power 4th (L4) Gear									
154.6 (115.3)	11475 (51.05)	5.05 (8.13)	2251	0.9	0.628 (0.382)	11.22 (2.21)	172 (78)	43 (6)	29.0 (98.3)
75% of Pull at Reduced Engine Speed 5th (M1) Gear									
230.0 (171.5)	17195 (76.49)	5.02 (8.07)	1968	1.6	0.469 (0.285)	15.02 (2.96)	174 (79)	43 (6)	29.0 (98.3)
50% of Pull at Reduced Engine Speed 5th (M1) Gear									
154.8 (115.4)	11445 (50.90)	5.07 (8.16)	1979	1.0	0.538 (0.327)	13.10 (2.58)	172 (78)	43 (6)	29.1 (98.4)

Location of Test: Prairie Agricultural Machinery Institute(PAMI), Portage La Prairie, Manitoba, Canada R1N 3C5

Dates of Test: October, 1998

Manufacturer: New Holland Canada Ltd. Versatile Farm Equipment Operations, Box 7300, 1260 Clarence Ave., Winnipeg, Manitoba, Canada R3C 4E8

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.845 **Fuel weight** 7.034 lbs/gal (0.843 kg/l) **Oil** SAE 15W-40 **API service classification** CF-4 **Transmission and hydraulic lubricant** Esso Hydraul 56 fluid **Final Drive lubricant** SAE 80W90 gear oil

ENGINE: Make Cummins Diesel **Type** six cylinder vertical with turbocharger and intercooler **Serial No.** 11899160 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 5.50" x 6.00" (139.7 mm x 152.4 mm) **Compression ratio** 18.5 to 1 **Displacement** 855 cu in (14039 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** vertical **Cooling medium temperature control** thermostat

CHASSIS: **Type** Four wheel drive with duals **Serial No.** D107740 **Tread width** rear 72.0" (1829 mm) and 128.9" (3275 mm) front 72.0" (1829 mm) and 128.9" (3275 mm) **Wheel base** 133.0"(3380 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 2.96 (4.77) second 3.47 (5.58) third 4.04 (6.51) fourth 4.71 (7.58) fifth 5.38 (8.66) sixth 6.30 (10.13) seventh 7.34 (11.81) eighth 8.55 (13.75) ninth 11.15 (17.95) tenth 13.04 (20.98) eleventh 15.21 (24.48) twelfth 17.70 (28.49) reverse 3.84 (6.18), 4.49 (7.23), 5.24 (8.43), 6.10 (9.82) **Clutch** multiple wet disc hydraulically operated by foot pedal **Brakes** caliper disc hydraulically operated by foot pedal **Steering** hydrostatic and articulated **Power take-off** 1000 rpm at 2106 engine rpm **Unladen tractor mass** 31865 lb (14453 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

DRAWBAR PERFORMANCE

MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.lhr/gal (kW.h/l)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
2nd (L2) Gear									
272.6 (203.3)	34630 (154.05)	2.95 (4.75)	1974	10.4	0.485 (0.295)	14.53 (2.86)	176 (80)	43 (6)	29.0 (98.3)
3rd (L3) Gear									
291.9 (217.7)	33360 (148.40)	3.28 (5.28)	1801	6.5	0.434 (0.264)	16.24 (3.20)	174 (79)	41 (5)	29.0 (98.2)
4th (L4) Gear									
296.8 (221.3)	28380 (126.24)	3.92 (6.31)	1800	3.8	0.433 (0.263)	16.29 (3.21)	176 (80)	41 (5)	29.0 (98.1)
5th (M1) Gear									
301.3 (224.7)	24845 (110.51)	4.55 (7.32)	1804	2.7	0.420 (0.255)	16.80 (3.31)	176 (80)	41 (5)	29.0 (98.1)
6th (M2) Gear									
302.9 (225.9)	21280 (94.66)	5.34 (8.59)	1800	2.1	0.415 (0.252)	16.98 (3.34)	176 (80)	41 (5)	28.9 (98.0)
7th (M3) Gear									
302.3 (225.4)	18115 (80.59)	6.26 (10.07)	1801	1.7	0.413 (0.251)	17.06 (3.36)	176 (80)	41 (5)	28.9 (98.0)
8th (M4) Gear									
299.3 (223.2)	15390 (68.45)	7.29 (11.74)	1800	1.4	0.415 (0.252)	16.98 (3.34)	176 (80)	39 (4)	28.9 (97.9)

NOTE: This tractor was not equipped with a 3 point hitch when tested. The 3 point hitch performance data shown on this report is from a test series done on the New Holland 9282 Diesel.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturers claim of 50 gal/min (189.3 l/min) hydraulic flow. The pull in 2nd (L2) gear was limited do to tire hop. The performance results on this summary were taken from OECD tests conducted under the Code II Test Code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1816**, Nebraska Summary 283, July 12, 1999.

Brent T. Sampson
Test Engineer

L.L. Bashford
G.J. Hoffinan
R.D. Grisso, Jr
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB

dB(A)

At 75% Load in 5th(M1) Gear	78.0
Bystander	--

TIRES AND WEIGHT

Rear Tires No., size, ply & psi (kPa)
Front Tires No., size, ply & psi (kPa)
Height of Drawbar
Static Weight with operator Rear
Front
Total

Tested Without Ballast

Four 20.8R42; **, 9 (60)
Four 20.8R42; **, 10 (71)
21.3 in (541 mm)
11915 lb (5405 kg)
20115 lb (9123 kg)
32030 lb (14528 kg)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: IVN

Quick Attach: none

Maximum Force Exerted Through Whole Range: 15285 lb (68.0 kN)

- i) Opening pressure of relief valve: NA
 Sustained pressure of the open relief valve: 2875 psi (198 bar)
- ii) Pump delivery rate at minimum pressure: 47.2 GPM (178.8 l/min)
- iii) Pump delivery rate at maximum
 hydraulic power: 45.1 GPM (170.7 l/min)
 Delivery pressure: 2305 psi (159 bar)
 Power: 60.6 HP (45.2 kW)

THREE POINT HITCH PERFORMANCE (SAE Static Test)

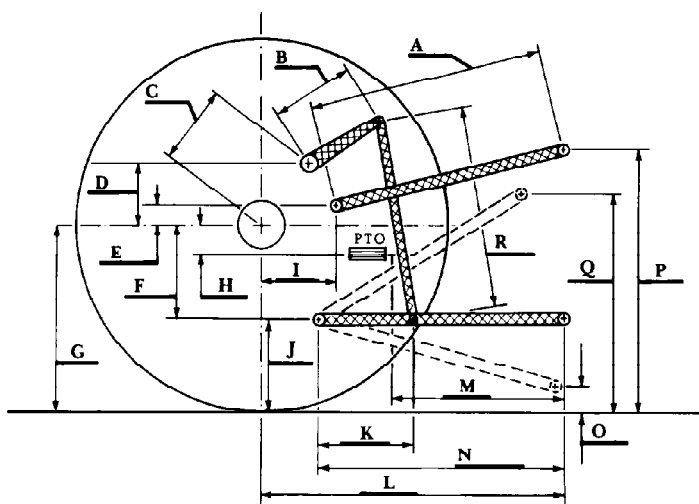
Observed Maximum Pressure psi (bar) 2800 (193)
 Location lift cylinder
 Hydraulic oil Temperature °F (°C) 150 (65)
 Location Hydraulic sump
 Category IVN
 Quick Attach None

System Pressure - 2600 psi (179 bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	19.4 (492)	27.2 (692)	35.1 (892)	44.1 (1120)
Lift force on frame lb.	25955	22535	20220	17905	13430
" " " " " (kN)	(115.4)	(100.2)	(89.9)	(79.6)	(59.7)

ASAE Test - System Pressure - 2800 psi (193 bar)

Hitch point distance to ground level in. (mm)	8.0 (203)	19.4 (492)	27.2 (692)	35.1 (892)	44.1 (1120)
Lift force on frame lb.	28025	24315	21820	19325	14465
" " " " " (kN)	(124.7)	(108.2)	(97.1)	(86.0)	(64.4)



HITCH DIMENSIONS AS TESTED NO LOAD

	inch	mm
A	27.8	705
B	18.6	472
C	27.0	685
D	19.0	483
E	13.4	341
F	10.4	263
G	33.7	855
H	1.7	43
I	25.3	642
J	23.3	592
K	18.0	457
L	53.4	1356
M	25.3	718
N	43.0	1092
O	9.1	230
P	50.3	1277
Q	41.3	1050
R	33.1	842